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Recommended Citation

Steele, J. M. (2005). Darrell Huff and Fifty Years of How to Lie with Statistics. *Statistical Science*, 20 (3), 205-209. <http://dx.doi.org/10.1214/088342305000000205>

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Abstract

Over the last fifty years, *How to Lie with Statistics* has sold more copies than any other statistical text. This note explores the factors that contributed to its success and provides biographical sketches of its creators: author Darrell Huff and illustrator Irving Geis.

Keywords

Darrell Huff, Irving Geis, *How to Lie with Statistics*, numeracy, graphs, crescent cow

Disciplines

Physical Sciences and Mathematics

Darrell Huff and Fifty Years of *How to Lie with Statistics*

J. Michael Steele

Abstract. Over the last fifty years, *How to Lie with Statistics* has sold more copies than any other statistical text. This note explores the factors that contributed to its success and provides biographical sketches of its creators: author Darrell Huff and illustrator Irving Geis.

Key words and phrases: Darrell Huff, Irving Geis, *How to Lie with Statistics*, numeracy, graphs, crescent cow.

1. TOUCHING A MILLION LIVES

In 1954 former *Better Homes and Gardens* editor and active freelance writer Darrell Huff published a slim (142 page) volume which over time would become the most widely read statistics book in the history of the world. In its English language edition, more than one-half million copies of *How to Lie with Statistics* have been sold. Editions in other languages have been available for many years, and new translations continue to appear. In 2003 the first Chinese edition was published by the Department of Economics of Shanghai University.

There is some irony to the world's most famous statistics book having been written by a person with no formal training in statistics, but there is also some logic to how this came to be. Huff had a thorough training for excellence in communication, and he had an exceptional commitment to doing things for himself.

2. DARRELL HUFF AND THE PATH TO A FREELANCER'S LIFE

Darrell Huff was born on July 15, 1913 in Gowrie, Iowa, a small farming community fifty miles from Ames, Iowa. Huff received his early education in Gowrie, had a lively curiosity about almost everything and eventually evolved an interest in journalism. He

studied both sociology and journalism at the University of Iowa, but even before completing his bachelor's degree in 1938, Huff had worked as a reporter for *The Herald* of Clinton, Iowa and as a feature writer for *The Gazette* of Cedar Rapids. In 1937 he had also married Frances Marie Nelson, who would become his co-author, mother of his four daughters and wife of sixty-four years.

In 1939, when Huff finished his work at the University of Iowa with a master's degree, he made the move from newspapers to magazines. This was a golden age for the magazine industry and in some ways Iowa was at the heart of it. Through 1940, Huff served as an associate editor at *Look* magazine in Des Moines, and he then took a brief detour as editor-in-chief of D. C. Cook publishing in Elgin, Illinois. After two years in Elgin, he returned to Des Moines to become managing editor of the very influential *Better Homes and Gardens* [6].

Huff's position at *Better Homes and Gardens* put him at the top of his profession, but these were turbulent times. In 1944 Huff was offered the executive editorship of *Liberty* magazine, and he and his family made the hard decision to move to New York. Almost forgotten now, *Liberty* was at the time a magazine of great national importance. It competed vigorously with the famous *The Saturday Evening Post* with which it shared many contributors, readers and advertisers. Even today, *Liberty* competes with *The Saturday Evening Post* for the attention and affection of collectors of cover illustrations and nostalgic advertising art.

With the end of the Second World War, both New York and the editorship of *Liberty* lost some of their appeal to Huff. What had begun as an exciting adventure started to feel like a "rat race." As Huff would write sixteen years later in an article [14], "I suppose the whole

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thing got started because I developed a habit of grinding my teeth in my sleep.” Huff then went on to explain that one night when the teeth grinding was particularly ominous, his wife woke him saying, “This has got to stop.” Huff thought she meant the teeth grinding and he agreed, but it turned out that Fran had other things in mind. “Let’s get away from all this,” she said. “You can go back to freelancing.”

3. A DO-IT-YOURSELFER’S CALIFORNIA IDYLL

Freelance writing and photography had supported Huff through college, but he had no illusions about the challenge he would face trying to support a family without a steady job. Nevertheless, his wife Fran was undaunted, and they decided to move to California, build their own home and make a living through freelance writing. In 1946 they headed west with their life savings of \$4000 and a secondhand trailer towed behind a 1941 sedan. Today, such an action would be as sensible as looking for gold in the rivers, but those were different times. For \$1500 the Huffs picked up ten acres in Valley of the Moon, five miles from Sonoma.

Post-war rationing and a limited budget forced the Huffs to be creative, but after a few months of working on their house while living in their trailer, the Huffs moved into their first home of their own design. It was not finished, but it had a huge fireplace and an inspiring wall of glass facing the California foothills.

The Sonoma home was the first of several homes that Huff would build with his own hands, including one in Carmel on the Monterey peninsula. It has 3000 square feet, four bedrooms, a study, three baths and a hexagonal living room that looks directly over the Pacific. It has been featured in numerous articles and has been honored by the National Building Museum. Darrell Huff lived in his Carmel home until he died on June 27, 2001. Frances Marie Huff lives there today, where she is often visited by her daughters.

4. OF HUFF’S MANY BOOKS

At his core, Darrell Huff was a magazine man, and almost all of his writing was directed at the daily concerns of the common person. Popular writing often goes undocumented into history, and today it is not completely certain how many books Huff wrote. Cataloguers of the Library of Congress list fourteen volumes to his credit, but they missed at least two ([12] and [20]). Of Huff’s several hundred feature articles, only one [14] is available on the Internet.

Huff’s first book, *Pictures by Pete* [7], appeared in 1944 with the subtitle *A Career Story of a Young Commercial Photographer*; in 1945 Huff broadened his theme with *Twenty Careers of Tomorrow* [8]. Perhaps the young Huff was thinking out loud as he contemplated his own future. In any event, Huff took an entirely new direction in 1946 with his third book, *The Dog that Came True* [9].

Doing a dog book seemed to put Huff off book writing for a while, and for the next nine years he devoted himself to article writing and to do-it-yourself projects, such as his remarkable California homes. Still, when Huff took up his next book project, he bought himself a piece of posterity. The book was *How to Lie with Statistics* [10], and it is the reason why we celebrate Darrell Huff in this volume.

While the longevity of *How to Lie with Statistics* must have come as a surprise to Huff, the seeds for its initial success were carefully planted. Remarkably, it was reviewed *twice* in *The New York Times*, a feat that would be almost impossible today. First, on January 4, 1954, Burton Crane gave it a column [4] and-a-half in “The Business Bookshelf”; then on January 16, it got another half column [30] in Charles Poore’s “Books of The Times.” Both reviews were highly positive, though not especially insightful. In August of 1954, Huff got to follow up in the *Times* with a more informative feature article [11] of his own, “How to Spot Statistical Jokers.” At the bottom of the first column, Huff added a footnote that says “Darrell Huff is a specialist in reading between statistical lines. He is the author of the book *How to Lie with Statistics*.” This does indeed seem to be how the world most remembers him today.

Darrell Huff was not one to argue with success, and the thoughts and skills that led to *How to Lie with Statistics* were to provide the basis for six further books that would deal with what we now call quantitative literacy. The first of these was the natural *How to Take a Chance* [12], where he again partnered with the brilliant illustrator Irving Geis. Even though the sales of this book were small in comparison with *How to Lie with Statistics*, it was still a solid success.

Huff’s other efforts in quantitative literacy were also commercially successful, but less dramatically so. They include *Score: The Strategy of Taking Tests* [13] and *Cycles in Your Life* [15], two volumes which set a pattern that others would carry to even greater commercial success. In *How to Figure the Odds on Everything* [17], Huff polished and modernized his treatment of the themes that he first addressed in *How to Take a Chance* [12].

Darrell Huff's last book, *The Complete How to Figure It* [19], was written with the design and illustration assistance of two of his daughters, Carolyn and Kristy. It was published in 1996 when Huff was eighty-three years old, and it is an unusual book that is in many ways strikingly original. Its modular structure suggests that it may have been brewing for many years. The remainder of Huff's books ([16, 18, 20–23]) deal more directly with household projects than with quantitative literacy, but in each of these one finds considerable cutting and measuring—practical challenges that put to test even the most quantitatively literate.

5. FOUR SOURCES OF SUCCESS

When one asks what may have led to the remarkable success of *How to Lie with Statistics*, it is natural to consider four likely sources: the title, the illustrations, the style and the intellectual content. In each case, from the perspective of fifty years, one finds more than might have originally met the eye.

The Title

Many statisticians are uncomfortable with Huff's title. We spend much of our lives trying to persuade others of the importance and integrity of statistical analysis, and we are naturally uncomfortable with the suggestion that statistics can be used to craft an intentional lie. Nevertheless, the suggestion is valid. People do lie with statistics every day, and it is to Huff's credit that he takes the media (and others) to task for having stretched, torn or mutilated the truth.

Irving Geis, the illustrator of *How to Lie with Statistics*, also said [5] what many have thought: "Huff could have well titled it *An Introduction to Statistics* and it would have sold a few hundred copies for a year or two. But with that title, it's been selling steadily since 1954." Indeed, the title has done more than simply stand the test of time; it has been honored through the years by other authors who pursued their own variations, including *How to Lie with . . . charts* [24], maps [26], methodology [31] and even "Your Mac" [2].

The Illustrations—and the Illustrator

Although it is now commonplace to see cartoons in serious books, it was not always so. Huff and his illustrator, Irving Geis, helped to pave the way. As an experienced magazine editor, Huff may—or may not—have foreseen this development, but what Huff surely saw was the brilliance of his partner.

Irving Geis was born in New York in 1908 as Irving Geisberg [1], but he attended high school in Anderson,

South Carolina and studied architecture at Georgia Tech before going to the University of Pennsylvania, where he obtained a Bachelor of Fine Arts degree in 1929. He found success as a magazine illustrator, and the first pictures that many of us ever saw of Sputniks orbiting, continents drifting or double helixes dividing, were the work of Irving Geis.

Nevertheless, it was through his illustrations of complex molecules that Geis assured his own place in history. His involvement began with a 1961 *Scientific American* article by John Kendrew where Geis illustrated the first protein crystal structure to be discovered, that of sperm whale myoglobin. Large molecules provided Geis with a perfect venue for his talents, and he continued to illustrate them for the rest of his life. He died on July 22, 1997, and, in his funeral oration, Richard Dickerson [5] called Geis the "Leonardo da Vinci of protein structure."

The Style

In a word, Huff's style was—*breezy*. A statistically trained reader may even find it to be breezy to a fault, but such a person never was part of Huff's intended audience. My copy of *The Complete Idiot's Guide to the Roman Empire* [27] is also breezy, but, since I am not a historian, that is just the way I like it.

We all know now (history has taught us!) that many subjects can be made more accessible when they are lightened up with cartoons and an over-the-top casualness. Fifteen years of *Idiot*, *Dummy* and *Cartoon* guides have shown that this formula works—not every time—but often enough to guarantee that such guides will be bookstore staples for many years to come. It would require careful bibliographical research to determine how much credit Huff deserves for this formula, but even a quick look will show that many of the elements of the modern formula are already present in *How to Lie with Statistics*. In the publishing field, this is what one means by pioneering, original work.

The Content

A great title, great illustrations and chatty quips will quickly run out of steam unless they are used in support of genuine intellectual content. The first four chapters (The Sample with the Built-in Bias, The Well-Chosen Average, The Little Figures That Are Not There and Much Ado about Practically Nothing) deal with material that is covered in any introductory statistics class, so to statisticians there is not much that is original here—or is there? These chapters take only forty-nine (breezy, cartoon-filled) pages, yet I suspect that many

of us would be content to know that our students could be certain to have a mastery of these chapters a year after having completed one of our introductory classes.

The next three chapters (The Gee-Whiz Graph, The One-Dimensional Picture and The Semiattached Figure) deal with graphics, and to me these are the most original in the book, which, incidentally, I first read as a high school student in Lubbock, Texas. What struck me then—and still strikes me now—was the utter devilishness of the “crescive cow” illustration, which uses a 1936 cow that is $25/8$ taller than an 1860 cow to demonstrate the growth of the US cow population to 25 from 8 million between 1860 and 1932. Since we intuitively judge a cow more by her *volume* than by her *height*, this illustration is massively, yet slyly, deceptive. Today the graduate text for such insights would be Tufte’s beautiful book *The Visual Display of Quantitative Information* [32].

Huff’s next two chapters are more heterogeneous. Chapter 8, Post Hoc Rides Again, gives just a so-so discussion of cause and effect, but Chapter 9 makes up for the lull. In How to Statisticulate, Huff takes on an issue that statisticians seldom discuss, even though they should. When we find that someone seems to be “lying with statistics,” is he really lying or is he just exhibiting an unfortunate incompetence? Huff argues that it is often simple, rock-bottom, conniving dishonesty, and I believe that Huff is right.

Huff’s last chapter is How to Talk Back to a Statistic, and it gets directly to what these days we cover in courses on critical thinking. He boils his technique down to just five questions: Who says so? How does he know? What’s missing? Did someone change the subject? Does it make sense? Today anyone can test the effectiveness of these questions simply by checking how well they deal with problems such as those collected by Best [3], Levitt and Dubner [25] and Paulos [28, 29].

6. ABOUT THE SPECIAL ISSUE

This special section of *Statistical Science* collects seven further articles that address issues with which Huff and Geis would surely have had a natural rapport:

- Joel Best: Lies, Calculations, and Constructions: Beyond *How to Lie with Statistics*
- Mark Monmonier: Lying with Maps
- Walter Krämer and Gerd Gigerenzer: How to Confuse with Statistics or: The Use and Misuse of Conditional Probabilities
- Richard De Veaux and David Hand: How to Lie with Bad Data
- Charles Murray: How to Accuse the Other Guy of Lying with Statistics
- Sally Morton: Ephedra
- Stephen E. Fienberg and Paul C. Stern: In Search of the Magic Lasso: The Truth About the Polygraph.

The first four of these articles explore a remarkable variety of newly discovered pathways by which statistical lies continue to flow into our collective consciousness. The fifth piece, by Charles Murray, then amusingly explores the Swiftian proposal that young social scientists may be somehow secretly coached in subtle techniques for suggesting that someone else might be lying. Finally, in the last two pieces, we see how statistics is used (or not used) for better or worse in the public policy domain. Morton reprises the role of statistics in the regulatory background of the controversial herb ephedra, and Fienberg and Stern take on the technology of lie detection, where great expectations and empirical evidence face irreconcilable differences.

ACKNOWLEDGMENTS

I am especially pleased to thank Frances Marie Huff for her willingness to discuss the life and career of Darrell Huff. I also wish to thank Ed George, Dean Foster and Milo Schield for their advice and encouragement at the beginning of this project, Paul Shaman and Adi Wyner for their comments on earlier drafts, and George Casella for giving me the original green light.

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